Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	15	((audio$1 or voice$1) near2 (authenticat$3 or fingerprint$3)) same matrix$2	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/16 15:33
L2	18	((audio$1 or voice$1) near2 (authenticat$3 or fingerprint$3)) and (matrix$2 with database$1) and frequency	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/16 15:34
L3	0	2 and 707/9,102,103,3.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/16 15:35
L4	0	2 and 713/178.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/16 15:35
L5	0	2 and "713"/$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/09/16 15:35

Fingerprinting and forensic analysis of multimedia

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↑ ABSTRACT

One of the prime reasons movie and music studios have ignored the Internet for open-networked multimedia content delivery, has been the lack of a technology that can support a secure digital rights management (DRM) system on a general purpose computer. The difficulty of building an effective multimedia DRM stems from the fact that traditional cryptograic primitives such as encryption or scrambling do not protect audio or video signals once they are played in plain-text. This fact, commonly referred to as "the analog hole," has been responsible for the popularity of multimedia file sharing which cannot be controlled, at least technically, by content's copyright owners.

In this paper, we explore multimedia fingerprinting as an answer to "the analog hole" problem. We propose a new ase-shifted spread-spectrum fingerprinting paradigm particularly tailored for fast detection. Next, we present two techniques for fast maximum-likelihood audio and video synchronization designed to cope with typical de-synch attacks. We analyze the collusion resistance of a large class of spread-spectrum fingerprinting systems using a new, gradient attack. Surprisingly, we show that the collusion resistance of traditional spread-spectrum fingerprints is a small constant that does not depend on the object size.

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Note: OCR errors may be found in this Reference List extracted from the full text article. ACM has opted to expose the complete List rather than only correct and linked references.

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↑ INDEX TERMS

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K. Computing Milieux

↳ **K.4** COMPUTERS AND SOCIETY

↳ **K.4.4** Electronic Commerce

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